

## **2005 Hurricane Season Summary**

The 2005 Hurricane Season was a record-breaking season and will be known as one of the most damaging hurricane seasons in history. Tropical cyclones developed in the Gulf of Mexico, the Caribbean Sea, and the inter-tropical convergence zone of the Atlantic Ocean. This year, Florida experienced 5 direct hits from tropical cyclones between June and November. Tropical Storm Arlene made landfall near Pensacola with winds of 60mph. Hurricane Dennis made landfall over Pensacola with winds of 115mph. Hurricane Katrina made landfall near Ft. Lauderdale with winds of 75mph. Tropical Storm Tammy made landfall over northern Florida with winds of 50mph. Finally, Hurricane Wilma made landfall near Naples, Fl with winds of 125mph.

Although not making a direct landfall, Hurricane Ophelia's western eyewall did brush the outer banks of North Carolina with winds of 75mph. Also, Hurricane Rita passed just south of the Florida Keys with winds of 80mph.

The 2005 Hurricane Season will not only go down in history as the busiest season, but also as the costliest. The following is a list of new tropical cyclone records set by the 2005 Hurricane Season:

1. Highest number of named storms in the Atlantic Region-26.
2. Most hurricanes (winds over 74mph) in one season-13.
3. Most Category V hurricanes (winds over 156mph) in one season-3.
4. The lowest central pressure ever recorded-882mb with Hurricane Wilma.
5. Most intense hurricane (winds over 111mph) landfalls over the United States-4, Dennis, Katrina, Rita, Wilma.
6. Highest economic impact with preliminary estimated United States damage over \$134 Billion.\*\*

Indian River County experienced direct impacts from Hurricane Wilma as it crossed the Florida peninsula. Wilma made landfall near Naples, crossed the peninsula and exited near the Jupiter Inlet. Sustained winds in Indian River County were near 80mph. Sustained power outages became the biggest problem in Indian River County with Wilma. For the second year in a row, Indian River County was included in a Presidential Declaration of Disaster.

During 2005, the Atlantic region has had 29 tropical cyclones, of which 26 became named storms, of which 13 of the named storms became hurricanes, of which 7 of the hurricanes became major hurricanes, of which 3 of the major hurricanes became

Category V hurricanes. The following chart compares actual activity to Dr. Gray's May, 2005 official forecast for the 2005 season:

	<u>ACTUAL</u>	<u>Dr. GRAY's FORECAST</u> <u>(May 31, 2005)</u>
Named Storms	26	15
Hurricanes	13	8
Major Hurricanes	7	4

Of the 29 tropical cyclones this year, 7 made landfall somewhere in the United States. The following is a review of the landfalling tropical cyclones during 2004.

<u>SYSTEM</u>	<u>WINDS</u>	<u>LANDFALL LOCATION</u>
Tropical Storm Arlene	60mph	Florida Panhandle
Tropical Storm Cindy	70mph	Grand Isle, Louisiana
Hurricane Dennis	115mph	Pensacola, Florida
Hurricane Katrina	145mph	Florida/Louisiana/Mississippi
Hurricane Rita	120mph	Sabine Pass, Texas
Tropical Storm Tammy	50mph	Mayport, Florida
Hurricane Wilma	120mph	Everglades City, Florida

For Florida, the landfall of 5 tropical cyclones can be attributed to a few meteorological factors. First, the unusual development location of the cyclones near the Bahamas rather than in the deep tropics. Second, very little upper level wind shear. The lack of wind shear allowed for seven (7) hurricanes to become major hurricanes. Finally, very warm Atlantic surface water temperatures. The warm temperatures allowed for rapid intensification and sustained major hurricane status for several days.

This was the third year for the 5 day forecast from the National Hurricane Center. The 4-5 day projections were accurate and provided plenty of time for everyone to prepare. For all three Category V storms, the 4-5 forecast provided plenty of time for preparations to be finished. The actual landfall areas may have changed, but the general area of hurricane force winds remained constant and no one was surprised. Once again, it is important for everyone to watch the hurricane force wind area and not center on the exact landfall track. The Hurricane Watches and Warnings provided good coverage of the actual winds experienced during all hurricanes over Florida. As

we look to the future, scientists at the National Hurricane Center will be focusing on improving the intensity forecast. The intensity forecast continues to be difficult as researchers try to develop an accurate intensity model.

Looking ahead to 2006, we can expect to see another above average year for tropical cyclone development. The big factor for the 2006 season will be the development or absence of the El Nino phenomenon in the Eastern Pacific Ocean. El Nino data will be available in April, 2006. Also, over the winter and spring, we will be watching to see if sea surface temperatures cool sufficiently to reduce the intensity of the 2006 storms.

The following is a list of the named tropical cyclones for the 2005 Hurricane Season:

<b><u>NAME</u></b>	<b><u>DATES</u></b>	<b><u>HIGHEST WINDS</u></b>
Tropical Storm Arlene	June 9-11	70mph
Tropical Storm Bret	June 29	40mph
Tropical Storm Cindy	July 5-6	70mph
Hurricane Dennis	July 5-11	150mph
Hurricane Emily	July 12-21	145mph
Tropical Storm Franklin	July 22-29	70mph
Tropical Storm Gert	July 24-29	45mph
Tropical Storm Harvey	August 3-8	65mph
Hurricane Irene	August 7-8, 11-18	100mph
Tropical Storm Jose	August 22-23	50mph
Hurricane Katrina	August 24-30	175mph
Tropical Storm Lee	August 31	40mph

Hurricane Maria	September 2-10	115mph
Hurricane Nate	September 6-10	90mph
Hurricane Ophelia	September 7-18	90mph
Hurricane Philippe	September 18-23	80mph
Hurricane Rita	September 18-24	175mph
Hurricane Stan	October 2-4	80mph
Tropical Storm Tammy	October 5-6	50mph
Hurricane Vince	October 9-11	75mph
Hurricane Wilma	October 17-25	175mph
Tropical Storm Alpha	October 22-23	50mph
Hurricane Beta	October 27-31	115mph
Tropical Storm Gamma	November 13-20	45mph
Tropical Storm Delta	November 23-28	70mph
Tropical Storm Epsilon	November 29-	50mph

The 2005 Hurricane Season officially ends today (November 30, 2005). However, we remind everyone that every now and then we see a system develop in December.

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\*\*Based on information contained in the November 18, 2005, Summary of 2005

Atlantic Tropical Cyclone Activity and Verification Report, Department of Atmospheric Science, Colorado State University.